THE EFFECTIVENESS OF SACRAL MASSAGE IN REDUCTION OF PAIN DURING FIRST STAGE OF LABOUR AMONG PRIMI GRAVIDA MOTHERS AT SELECTED HOSPITAL IN MADURAI, TAMILNADU

A DISSERTATION SUBMITTED TO TAMILNADU DR.M.G.R. MEDICAL UNIVERSITY, CHENNAI IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING.

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ABSTRACT

INTRODUCTION:

Delivery is a natural phenomenon, it has been demonstrated that the accompanying pain is considered severe or extreme in more than half of cases. Besides conventional approaches, such as epidural analgesia, many complementary or alternative methods have been reported to reduce pain during labour and delivery.

The research design of this study was quasi experimental post test only design. The setting of the study was the Infant Jesus Hospital at Madurai. The sample size was 60, (i.e) 30 in control group and 30 in experimental group respectively.

PROBLEM STATMENT:

A Study to determine the effectiveness of sacral massage in reduction of pain during first stage of labour among primi gravida mothers at selected Hospital, Madurai.

OBJECTIVES:

- To assess the level of pain among control group mothers.
- To assess the level of pain among experimental group of mothers after giving sacral massage.
- To determine the effectiveness of sacral massage in terms of reduction in pain among experimental group and control group mothers.
- To find out the association between effectiveness of sacral massage with selected demographic variables of primi gravida mothers such

as age, education, religion, type of family, phases of labour, Types of labour among experimental group mothers.

HYPOTHESIS:

- There will be a significant difference in post test pain score among the mothers in experimental group and control group.
- There will be a significant association between the effectiveness of sacral massage and selected demographic variables such as age, education, religion, type of family, phases of labour, types of labour and duration of first stage of labour among experimental group.

MAJOR FINDINGS OF THE STUDY:

- In control group 100% had severe pain. Experimental had 93**%** moderate pain and 7% severe pain in the post test.
- The effectiveness of sacral massage was found between control and experimental group showed significant improvement in pain score. The observed value was 26.42 at 95% of confidential interval (2.73704- 3.19629).
- Comparison of pain score control and experimental group after sacral massage. In pain, significant value is not less than 0.05, it is noted that improved in pain score level.
- There was a significant association between post test pain score of experimental group and selected demo variables such as age, education, type of family and type of labour.

RECOMMENDATION:-

- A similar study can be done on a large sample.
- A study can be done involving family members or husband in pain reduction during labour using sacral massage
- A comparative study could be done to assess the effectiveness of sacral massage in terms of reduction of pain among primi gravid mothers and multi gravida mothers.
- A comparative study can be carried out in hospital and community set up.

CONCLUSION:-

Labour is beautiful experience to a women and pain is a critical determinant for survival in the labour period. If the mother with labour pain, it is fear and anxiety for the mother. As per the record, the occurrence of pain during labour is high, but it is differ from individual to individual. Demonstration is an effective method of increasing the practice of nurse as well as family members regarding sacral massage.

CHAPTER-I

INTRODUCTION:

“Birthing is natural, the babies desired for it,
We’ll make it as natural as possible”.

-Morison susan Jaine

Health care is changing traumatically, as new knowledge and technology develop so quickly. They push boundaries of professional practice forward at an astonishing pace. In no other speciality’s, this change as obvious as in maternal and neonatal nursing. The professional nurse of today and tomorrow faces an almost overwhelming array of technological application to take care and it is called on to assume increasing responsibilities. At the same time, the human aspect is still having the at most importance in such overwhelming life event.

Pain as a sensorial, emotionally unpleasant experience, associating it to actual or potential tissue lesions. It is involved by unpleasant, subjective sensations and each individual uses the word in accordance with his/her previous experiences, in a certain way representing an emotional experiment.

“For all the happiest mankind can gain is not in pleasure,
But in rest from pain”.

-Dnyden

For most women, labour pain is considered the worst experience of their lives. The pain of uterine contractions is a complex process involving interactions between central and peripheral mechanisms, as well as the continuous interchange of information by ascending and descending nociceptive channels. During the first stage, i.e. dilation, pain

is visceral, arising due to uterine contraction and dilation of the cervix, transmitted by the sympathetic efferent fibres. In this stage, pain is conveyed to the spinal cord at the level of T10-L1 by Delta A fibres and C efferent visceral fibres originating in the lateral wall and uterine bottom. The transmission that follows efferent from the uterus and cervix towards the spinal cord is conveyed by means of branches that communicate with the T10-L1 nerves. Therefore, the fibres that lead the painful impulse perform synapses with the interneuron of the dorsal spine returning after modulation.

Even though delivery is a natural phenomenon, it has been demonstrated that the accompanying pain is considered severe or extreme in more than half of cases. Besides conventional approaches, such as epidural analgesia, many complementary or alternative methods have been reported to reduce pain during labour and delivery.

Gate control theory which explains that the brain only processes so many signals at on time-that's why when you stub your toe you suddenly forget about the headache you used to have. By giving a labouring woman a positive, loving touch a birth partner can help decrease her perception of pain. Her labour still progresses, and she still has contractions but she doesn't feel them as strongly. Massage is a great form of natural pain relief for labour.

"Massage is a wonderful nurturing way to relieve tired, achy muscles and stressed-out joints,"

- McNeely.

Massage in general has many benefits for anyone, and better time to apply these benefits than during the stressful and exhausting process of child birth. Natural endorphins are released during massage which

provides a labouring mother with natural pain relieving agents from within her own body. Circulation is enhanced by massage which means less muscle fatigue for the mother and better blood flow to the baby. Stress hormone levels are also decreased during massage which can help a mother relax and lessen her overall pain levels as well.

NEED FOR THE STUDY:

Midwives are responsible for providing ‘the accessory care’ for woman during pregnancy, labour and delivery and puerperium {WHO1996}. There are two important factors that must be considered when carrying out this role. Firstly since the majority of women experience a normal pregnancy and child birth, they are self caring and therefore, they are able to ‘do for themselves’ what midwives would otherwise do for them. Secondly, providing the necessary care can notes a holistic approach that embraces the physical and psychological aspects of care {mccrea, 1998}.

A scientific definition of pain is ‘an unpleasant sensory and emotional experience associated with actual or potential tissue damage. Acute pain such as labour pain has two dimensions: a sensory or physical dimension, with the transmission of information, the pain stimuli, to the brain, and an affective dimension due to interpretation of these stimuli through the interaction of a wide variety of emotional, social, cultural and cognitive variables unique to the individual.

Some factors are associated with increased pain: first delivery, history of dysmenorrhoea (painful periods), fear of pain, a religious practice. Some factors diminish pain: Child birth preparation classes,

complications during pregnancy, wish to breast feed, high economic status, older age.

Massage therapy is a comprehensive intervention involving a range of techniques to manipulate the soft tissues and joints of the body. The purpose of massage therapy is to prevent, develop, maintain, rehabilitate or augment physical Utilisation of massage therapy in Canada is estimated to be 17-23% of the population and in Ontario specifically, 35% of the population has used massage therapy in the past two years. Massage therapy is increasingly viewed as a useful adjunct to conventional medical treatment in a variety of populations. This review highlights massage therapy for maternal and neonatal health and outlines where recent research suggests potential benefits.

A Canadian study (2006) comparing different pain syndromes found that average labour pain scores were higher in both nulliparous(first delivery) and multiparous women than the average scores previously recorded for out-patients with sciatic pain, toothache and fracture pain. However, whereas the average score is higher, its exact value differs greatly from one woman to another. Bonica found that labour pain was mild in 15% of cases, moderate in 35%, severe in 30% and extreme in 20%

In a randomised controlled study by Chang et al (2004), 60 primiparous women expected to have a normal childbirth were randomly assigned to either the experimental (n=30) or control(n=30) group. The experimental group received massage intervention comprising abdominal effleurage, sacral pressure and back kneading during labour. In the massage group, the woman received a 30-min massage during uterine

contractions first by the researcher and then by the partner during each of the three phases of labour. The intensity of pain between the two groups was compared in the latent phase (8-10cm). A t-test demonstrated that the massage group had significantly lower pain reactions in the latent phase.

Therapeutic touch (massage and loving touch) during labour relieved over-anxious mothers and decreased their perceived levels. Massage during labour can also help a mother feel a greater sense of support and overall control as the levels of stress hormones in her body are lessened. When a woman feels more secure and less stressed during labour the child birth process goes smoother, with fewer interventions needed and higher levels of satisfaction postpartum. Kiaus, Kennel and Klaus (2005).

Maternal mood during pregnancy has an impact on both maternal and neonatal health. Negative mood which includes depression and anxiety has been found to result in complications such as premature labour, low birth weight, and developmental and emotional issues for the infant. Interventions that have mood enhancing properties are important to maternal and neonatal health. Massage therapy (MT) is one intervention known for its mood enhancing properties.

During the labour room posting, the investigator was taking care of mothers with labour pain. One day one mother was shouting with the labour pain and asked the investigator “please can you rub my back its paining severely”. So the investigator also massaged her back then she became calm and quite comfortable. This incidence encouraged the investigator to do a research study on “to find out the effectiveness of sacral massage in relieving pain among primi gravid mothers during labour”.

PROBLEM STATMENT:

A Study to determine the effectiveness of sacral massage during first stage of labour in reduction of pain among primi gravida mothers at selected Hospital, Madurai.

OBJECTIVES:

- To assess the level of pain among control group of mothers.
- To assess the level of pain among experimental group mothers after giving sacral massage.
- To determine the effectiveness of sacral massage in terms of reduction in pain among experimental group mothers.
- To find out the association between effectiveness of sacral massage with selected demographic variables of primi gravida mothers such as age, education, religion, type of family, Types of labour, phases of labour and duration of first stage of labour among experimental group mothers.

HYPOTHESIS:

- There will be a significant difference in post test pain score among the mothers in experimental group and control group.
- There will be a significant association between the effectiveness of sacral massage and selected demographic variables such as age, education, religion, type of family, phases of labour, types of labour, duration of first stage of labour among experimental group.

OPERATIONAL DEFINITIONS:

SACRAL MASSAGE:

The rubbing, kneading of muscles joints of sacral area with the hands to stimulate their action.

FIRST STAGE OF LABOUR:

The first stage of labour usually recognised by the onset of regular uterine contractions and culminates in complete dilatation of cervix.

LABOUR PAIN:

A process of being aware of the discomfort, distress or suffering caused by rhythmical uterine contractions that occur at child birth by the primi mothers.

EFFECTIVENESS:

Effectiveness means reduction of pain during labour by sacral massage measured by visual analogue scale.

ASSUMPTION:

- The experimental group of mother may have less level of pain after manipulation.
- The Control group of mother have severe pain because there is no manipulation.

LIMITATIONS:

Period of data collection is

- Limited to 6weeks of period.
- Sample is limited to60 primi gravida mothers.
- Limited to particular hospital.

PROJECTED OUTCOME:

- The result of this study helps the investigator to know the effectiveness of sacral massage during first stage of labour among primi gravida mother.
- This study helps the primi gravida mother to take measures to reduce pain during first stage of labour.

CONCEPTUAL FRAMEWORK

The conceptual framework is a group of related ideas, statements or concepts. The term conceptual model is often used interchangeably with conceptual framework and sometimes with grand theories those that articulate a broad range of the significant relationship among the concepts of a discipline, Kozeir Barbar,(2005).

The conceptual framework for this study was derived from general system given by Ludwig Von Bertanlaffy's(1968). According to this theory, a system is a set of components or units interacting with each other within a boundary that filters the type and rate of exchange with the environment. All living systems are open in that there is a continual exchange of matters, energy and information. In open system, there are varying degree of interaction within the environment from which the system receives input and gives back output in the form of matter, energy and information.

The present study aims at evaluating the effectiveness of sacral massage during first stage of labour among primi gravida mothers.

General system theory is useful in breaking the whole process in to sequential tasks to ensure goal realization. Betalanffy explained that the system has three major aspects.

1. Input
2. through put
3. Output

INPUT

Input is any form of energy, information, material or human that enters into the system through its boundaries. Though the process of selection the system regulates the type and amount of Input received.

In this study, the input consists of demo variables such as age, education, religion, type of family, type of labour, phases of labour and duration of first stage of labour among primi gravid mothers.

THROUGH PUT

It is the process that occurs between the input and output, which enables the input to be transformed as output in such a way that can be readily used by the system.

The through put consists of providing sacral massage during first stage of labour among primi gravid mothers. It includes the process of post test to evaluate the mothers. After processing the input, the systems output to the environment is in an altered state.

OUTPUT

It is any energy information & material that is transferred to the environment. After processing the input, the system’s output to the environment is in an altered state.

The outcome of sacral massage is evaluated by Visual analogue scale . After post test, the improved pain score gained by the experimental group comparing to control group mothers. It indicates the effectiveness of sacral massage during the first stage of labour.

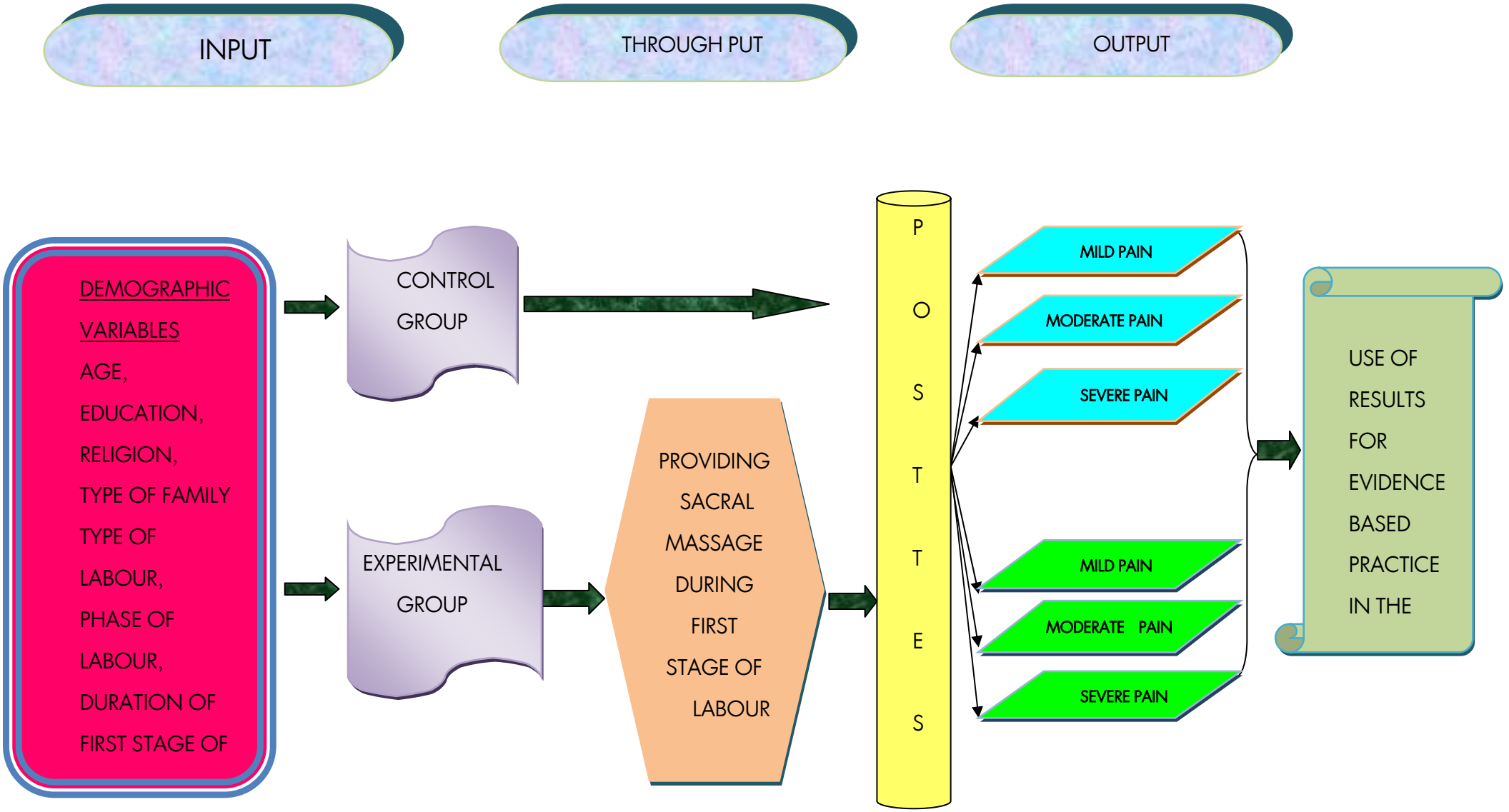


FIGURE:1 MODIFIED LUDWIG VON BERTALANFFYS GENERAL SYSTEM MODEL

CHAPTER II

REVIEW OF LITERATURE:

- General information about sacral massage
- General information about pain
- Pain perception of mothers in labour
- Study Related to effectiveness of sacral massage in labour pain

GENERAL INFORMATION ABOUT SACRAL MASSAGE:

TOUCH AND MASSAGE:

Touch: Learn to relax towards your partner's touch. If they see that you are tense in a particular area, your partner places there.

Massage: This can be done most effectively when you are learning into something. Your partner's places the heal of their hand into the small of your back and apply firm pressure in a small circular motion. This can be effective during the build up to a contraction.

GENERAL INFORMATION ABOUT PAIN:

Pain is a complex multi dimensional phenomenon. The understanding of this phenomenon is evolving as research conducted by scientists from many disciplines, like medicine physiotherapy including nursing IASP{International Association for the study of pain, such committee on taxonomy 1999} has given a proposed definition for pain, the definition states that pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage.

Pain is said to be 'a feeling of distress, suffering or agony caused by stimulation of specialised nerve endings' {O'Toole 1997}.

THE PATHOPHYSIOLOGY OF PAIN:

Pain stimulus and pain sensation:

Pain is caused by a stimulus; this stimulus may cause, or be on the verge of causing, tissue damage. Pain sensation may therefore be distinguished from other sensations, although emotions such as fear and anxiety are also experienced at the same time, there by affecting the person's perception of pain. It must also be remembered that a painful stimulus may also induce such changes by the sympathetic nervous system as increased heart rate, a rise in blood pressure.

There are four processes of nociceptive pain; Transduction Transmission, perception, and modulation. **Transduction** begins in the periphery when a pain producing stimulus sends an impulse across a peripheral nerve fibre. The pain fibre enters the spinal cord and travels one of several routes until ending within the Gray matter of the spinal cord. There the pain message either interacts with inhibitory nerve cells, preventing the pain stimulus from reaching the brain, or is transmitted uninhibited through the thalamus to the cerebral cortex, the brain interprets the quality of the pain and processes information from past experience, knowledge, and cultural associations in the perception of the pain.{Salerno and Willens, 1996}.

Nerve impulses resulting from the painful stimulus travel along afferent peripheral nerve fibres. Two types of peripheral nerve fibres conduct painful stimuli; the fast, myelinated A-delta fibres and the very small, slow, unmyelinated C fibres. The fibres send sharp, localized and distinct sensations that localize the source of the pain and detect its intensity. The C fibres relay impulses that are poorly localized, burning, and persistent {McCance and Heuther, 1998}.

Substances that affect the **transmission** of nerve stimuli, play an important role in the pain experience. These substances are found at the site of a nociceptor, at nerve terminals with in the dorsal corn of the spinal cord, and at receptor sites within the spinothalamic tract. Neuroregulators are divided in to two groups: neurotransmitters and neuromodulators. Neurotransmitters such as substance P send electrical impulses across the synaptic cleft between two nerve fibers. They are excitatory or inhibitory. Neuromodulators modify neuron activity and adjust or vary the transmission of pain stimuli, without directly transferring a nerve signal through a synapse.

Perception is the point at which a person is aware of pain. Pain stimuli are transmitted up the spinal cord to the thalamus and midbrain. From the thalamus, fibres transmit the pain message to various area of the brain, including the somatosensory cortex and association cortex {both in the parietal lobe}, the frontal lobe, and the limbic system {aice, 1991}.
The somatosensory cortex identifies the location and intensity of pain, and the association cortex determines how we feel about pain. There are cells within the limbic system that are believed to control emotion, particularly anxiety. Thus the limbic system may play an active role in processing the emotional reaction to pain. After nerve transmission ends within the higher brain canters, a person perceives the sensation of pain.

The process of inhibiting or changing pain impulses is called **modulation**, the final processes in nociception. During modulation, neurons that originate in the brain stem desend to the dorsal horn of the spinal cord. These neurons release substances such as serotonin, norepinephrine, and endogenous opiates{endorpins and enkephalins} that

work to inhibit the transmissionof the pain and help produce an analgesic effect{McCaffery and Pasero, 1999}.

Stress, excessive exercise, and other factors increase the release of endorpines, raising an individuals pain threshold{McCance and huether,1998}.

Pain perception of mothers in labour:

Pain control during labour is a very woman centred concept. There is much evidence to suggest that women are not always more satisfied by a birth experience that is pain free {Fairlie et al 1999, Morgan et al, 1982.

Two researchers in Japan revealed in their study on the intensity of memorised labour pain {Kabeyama & Miyoshi 2001} that self control is the most important predictor of satisfactory child birth experience for mothers. They state that women, who viewed labour as a challenge, in their attempt to control their breathing and relaxation, had much better outcomes. These active attitudes are supposed to reflect the positive attitudes to everything in daily life by the individual. The study goes on to say that not only does removal of excessive fear and anxiety make a birth experience more satisfactory but that it also increases the mothers bride and self confidence. A greater motivation for constructing good mother baby relationships also comes about.

Women have throughout the ages, supported and helped each other during the process of birth. There is much literature to venerate the presence of the doula, midwives or friends of the birthing woman and the positive effect of the presence of this person on the outcome of labour. Much midwifery and medical research has indicated that the one-to-one

support by a midwife in labour reduces the need for analgesia and improves the birth experience of the mother. It also shortens the length of the labour {Halldorsdottir & Karlsdottir 1996, Hodnett, 1995, Hodnett & Osborn 1989, Yerby 1996}.

Other reports reveal that there is little conformity between how women themselves perceive their pain relief and how this is viewed by the medical personnel, with medical staff finding that pain relief was sufficient for the women, whereas woman themselves stated that this was not so{Rajan 1993}.Mander{1992}states that the pain itself and its severity, plus the side effects of medication, make it difficult for the woman to maintain control during labour. Woman then require care, support, attention and advice at this time. Concerns have been raised as to whether women in labour, or the technology that seems to be so conspicuous at this time, are the centre for attention and consideration of professionals {Deakins 2001, Gould 2000, Walsh 2000}.

STUDY RELATED TO EFFECTIVENESS OF SACRAL MASSAGE TO REDUCE LABOUR PAIN:

Kimber L.et.al. {2008}, Massage for pain relief in labour, These findings suggest that regular massage with relaxation techniques from late pregnancy to birth is an acceptable coping strategy that merits a large trial with sufficient power to detect differences in reported pain as a primary outcome measure.

Latino-Am, Enfermagem {2007}, to evaluate the effectiveness of no pharmacological strategies on pain relief of labour, As to the application of massage {Lumbosacral massage}, the acceptance

percentages among the women in this study 80% of mothers relieve from pain.

Davim RM.et.al.{2007}, Non-pharmacological strategies on pain relief during labour, Lumbossacral massage –which reached satisfactory acceptation and applicability rates, were found to be effective in relieving pain of these labour mothers

Chang MY, et. al.{2006} Massage effects on labour pain, The results of study indicates that, although massage cannot change characteristics of pain experienced by women in labour, it can effectively decrease labour pain intensity at phase1 and phase 2 of cervical dilatation during labour. Nurses and caregivers could consider using massage to help labouring women through the labour pain.

Nalini (2006), Sample size 60, A comparison of non pharmacological approach on labour pain using visual analogue scale, The result of this study indicate that, although non pharmacological approach cannot change the characteristics of pain experienced by women in labour, it can effectively reduce the labour pain intensity.

Simkin PP,O'hara M{2002}, Non pharmacologic relief of pain during labour, Massage may be effective in reducing labour pain and improving other obstetric outcomes, and they are safe when used appropriately.

Chang MY. et al. {2002}, Effect of massage on pain and anxiety during labour, The experimental group had significantly lower pain reactions in the latent, active, and transitional phases. Twenty-six of the 30(87%) experimental group subjects reported that massage was helpful, providing pain relief and psychological support during labour.

The study, “Labour pain is reduced by massage therapy”, This study involved 28 women. The result of this study indicates that massage therapy reduces stress and pain during labour. The massage therapy group experienced decrease in labour pain {decrease of 1.5 [p<.001].

Mei-Yueh Chang. {2000}, Effects of massage on pain and anxiety during labour. The women experience of satisfaction with the birthing experience{MT vs. C- 4.17 vs. 3.70}. The use of massage therapy to decrease pain in all three stages of labour{latent, active and transition}.

CHAPTER-III

RESEARCH METHODOLOGY:

The methodology of research indicates the general pattern to gather empirical data for the problem under investigation. Research methodology includes research approach, research design, the setting, the population, the sample, criteria for sample selection, and method of sampling technique, method of data collection, description of the tool, validity, pilot study, plan for data analysis and protection of human subject right. The present study is aimed at evaluating the effectiveness of sacral massage during first stage of labour among primi gravida mother.

RESEARCH APPROACH:

The quantitative approach was used in this study.

RESEARCH DESIGN:

The research design adopted for this study was quasi experimental design.

SETTING OF THE STUDY:

This study was conducted in Infant Jesus Hospital at Madurai. It is situated 58Kms away from Matha College of Nursing. It is 25 bedded hospital with 7 beds for antenatal mothers and 2 labour tables for conducting delivery. Daily 100 m0thers are attending the outpatient department. They are conducting 3 – 5 deliveries daily.

POPULATION:

The target population for this study was primi gravida mother at the first stage of labour.

SAMPLE SIZE:

The total size of the sample was 60 primi gravida mothers in the first stage of labour (i.e.) 30 control groups and 30 experimental groups.

SAMPLING TECHNIQUE:

Convenience sampling was used to select the sample for this study.

CRITERIA FOR SAMPLE SELECTION:

INCLUSION CRITERIA:

- ♥ Who are willing to participate in this study.
- ♥ Mothers who are primi gravida.
- ♥ Mother who are in the first stage of labour
- ♥ Mothers who understands and able to communicate in Tamil.

EXCLUSION CRITERIA:

- ♥ Who are not willing to participate.
- ♥ Who are not in the first stage of labour

DEVELOPMENT OF THE TOOL:

The tool was constructed for the purpose of obtaining data for the study. And it was developed by the researcher on receiving the relevant literature search and expert opinion and suggestion the tool was developed by using visual analogue scale to assess the pain.

DESCRIPTION OF THE TOOL:

Section-I:

It deals with the demographic characteristics of mothers. It composed of age, sex, education, religion, type of family, type of labour, phases of labour and duration of the first stage of labour.

Section-II:

An observation check list for the technique of assessing the mother in labour and without any risk.

Section-III:

A visual analogue scale was used to assess the effectiveness of sacral massage during the first stage of labour among primi gravida mothers.

SCORING PROCEDURE:

A visual analogue scale was used to assess the effectiveness of sacral massage. This is 10 point rating scale (0-10).

The response will score as follows:

Mild pain	0 - 3 (0 - 30%)
Moderate pain	4 - 7 (40 - 70%)
Severe	8 - 10 (80 - 100%)

TESTING OF THE TOOL:

VALIDITY:

The tool was given to 4 experts from the nursing field and 1 expert from the medical field for content validity. Based on the validity suggestion the tool will be finalized.

RELIABILITY:

The visual analogue scale was prepared to assess the effectiveness of sacral massage was tested by the test and retest method to find out the level of pain. The reliability value was found to be r =0.75
This was found to be highly reliable.

PILOT STUDY:

Pilot study was conducted in same Infant Jesus Hospital at Madurai. This pilot study was carried out on 6 mothers who fulfil the inclusion criteria. Pilot study was carried out in same way as the final study in order to test the feasibility and practicability.

PROCEDURE FOR DATA COLLECTION:

Formal permission was obtained from medical officer before the conduction of main study. This study was conducted to 60 primi gravida mothers, who met the inclusion criteria. Among them, 30 mothers were taken as experimental group and 30 mothers for control group. Demo variables are collected from those mothers first and sacral massage was given to the experimental group mothers throughout the labour, only during uterine contraction. Both the experimental and control group were assessed for the progress of labour by using observational checklist. After delivery, the post test was conducted by using visual analogue scale. Each day 2-3 mothers were assessed. During data collection period the researcher maintained good rapport with the mothers and family members with their full co-operation.

DATA ANALYSIS:

Descriptive statistics (frequency, percentage and standard deviation) was used to analyse the study findings. Inferential statistics t-test was used to find out the association.

HUMAN RIGHTS:

The research proposal was approved by dissertation committee prior to pilot study and main study. Permission was obtained from the head of the department of obstetrics and gynaecology in nursing of Matha College of nursing Manamadurai.

Permission was obtained from medical officer of Infant Jesus Hospital at Madurai. Assurance was given to the study subjects that anonymity of each individual would be maintained.

CHAPTER-IV

DATA ANALYSIS AND INTERPRETATION

This chapter presents the analysis and interpretation of data collected from 60 women to evaluate the effectiveness of sacral massage among primi gravida mothers in Madurai.

Korlinger describes the data analysis as categorizing, ordering, manipulating and summarizing the data to obtain answer to research questions. Data analysis was conducted to reduce, organize and give meaning to the data. The data were collected, analyzed and interpreted according to the objectives of the study.

THE OBJECTIVES OF THE STUDY:-

- ♥ To assess the level of pain among control group of mothers.
- ♥ To assess the level of pain among experimental group mothers after giving sacral massage.
- ♥ To determine the effectiveness of sacral massage in terms of reduction in pain among experimental group mothers.
- ♥ To find out the association between effectiveness of sacral massage with selected demographic variables of primi gravida

mothers such as age, education, religion, type of family, phases of labour, Types of labour among experimental group mother.

During the analysis, the data were reduced to an interpretable form to summarize the findings, test the hypothesis and establish the relationship between variables.

ORGANIZATION OF THE STUDY FINDINGS:-

The data were analyzed and presented under the following section.

Section-I

Frequency and percentage distribution of samples on selected demographic variables.

- Frequency and percentage distribution of samples (control group).
- Frequency and percentage distribution of samples (Experimental group).

Section-II

Frequency distribution of post test pain score of samples

- Frequency distribution of samples pain score in control group.
- Frequency distribution of samples pain score in experimental group.

Section-III

The effectiveness of sacral massage.

Section-IV

Association between the level of pain score of experimental and control group and selected demographic variables.

SECTION I

TABLE 1

FREQUENCY AND PERCENTAGE DISTRIBUTION OF SAMPLES (CONTROL GROUP) ACCORDING TO THEIR DEMOGRAPHIC OF PRIMI GRAVIDA MOTHERS.

N=30

S.No	CHARACTERISTICS	FREQUENCY	PERCENTAGE
1	AGE		
	18-24Years	13	43%
	25-31Years	14	47%
	32-38Years	3	10%
2	EDUCATION		
	Illiterate	7	23%
	School level	15	50%
	College level	8	27%
3	RELIGION		
	Hindu	18	60%
	Muslim	4	13%
	Christian	8	27%
4	TYPE OF FAMILY		
	Nuclear family	20	67%
	Joint family	10	33%
5	TYPE OF LABOUR		
	Spontaneous	6	20%
	Induced	24	80%
6	PHASES OF LABOUR		
	Latent phase	16	53%
	Active phase	8	27%

	Transitional phase	6	20%
7	DURATION OF FIRST STAGE OF LABOUR		
	Less than 10hours	11	37%
	11 - 16 hours	19	63%

Table 1 shows that regarding the age of the control group mothers. 13(43%) were between 18 – 24 years, and 14(47%) were found to be between 25 – 31years, and 3(10%) found to be between 32 – 38years.

Regarding educational status of the control group mothers, 7(23%) were in illiterate, 15 (50%) studied in school level, 8(27%) studied in college level.

Regarding religion of the control group mothers, 18(60%) were in Hindu, 4(13%) were Muslim and 8(27%) were Christian.

Regarding type of family in the control group mothers, 20(67%) were nuclear family, 10(33%) were joint family.

Regarding type of labour in the control group mothers, 6(20%) were spontaneous labour and 24(80%) were induced labour.

Regarding phases of labour of the control group mothers 16(53%) were the latent phase, 8(27%) were the active phase, 6(20) were the transitional phase.

Regarding duration of the first stage of labour of the control group mothers, 11(37%) were less than 10hours and 19(63%) were found between 11 – 16hours.

FIGURE 2: PERCENTAGE DISTRIBUTION OF CONTROL GROUP ACCORDING TO THEIR AGE

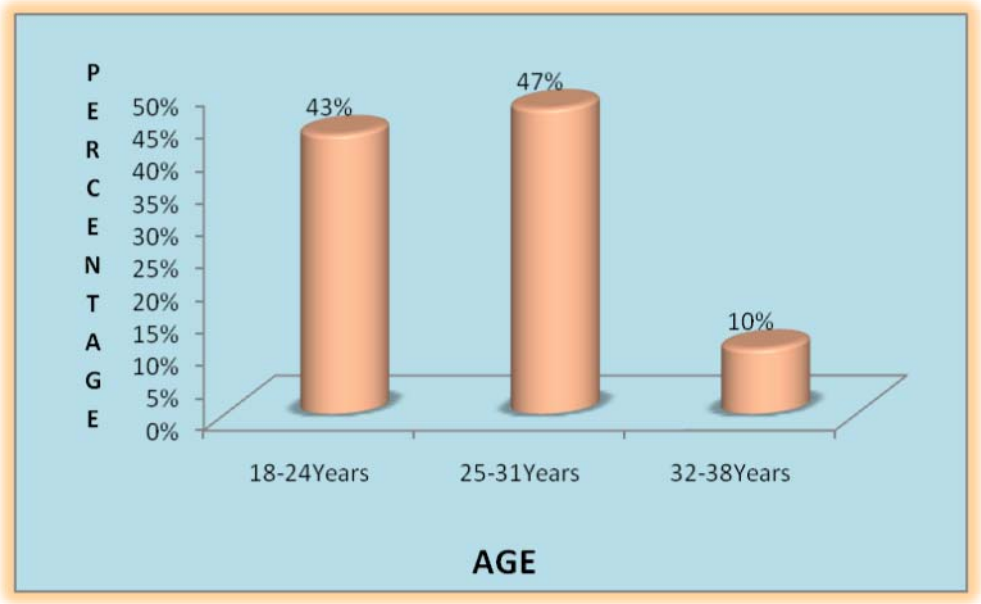


FIGURE 3: PERCENTAGE DISTRIBUTION OF CONTROL GROUP ACCORDING TO THEIR EDUCATION

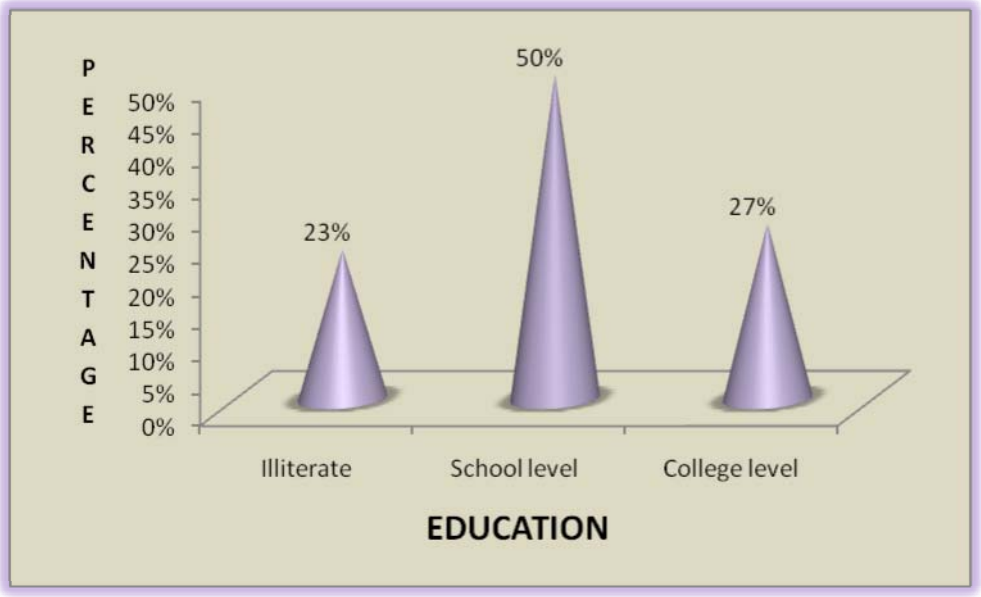


FIGURE 4: PERCENTAGE DISTRIBUTION OF CONTROL GROUP ACCORDING TO THEIR RELIGION

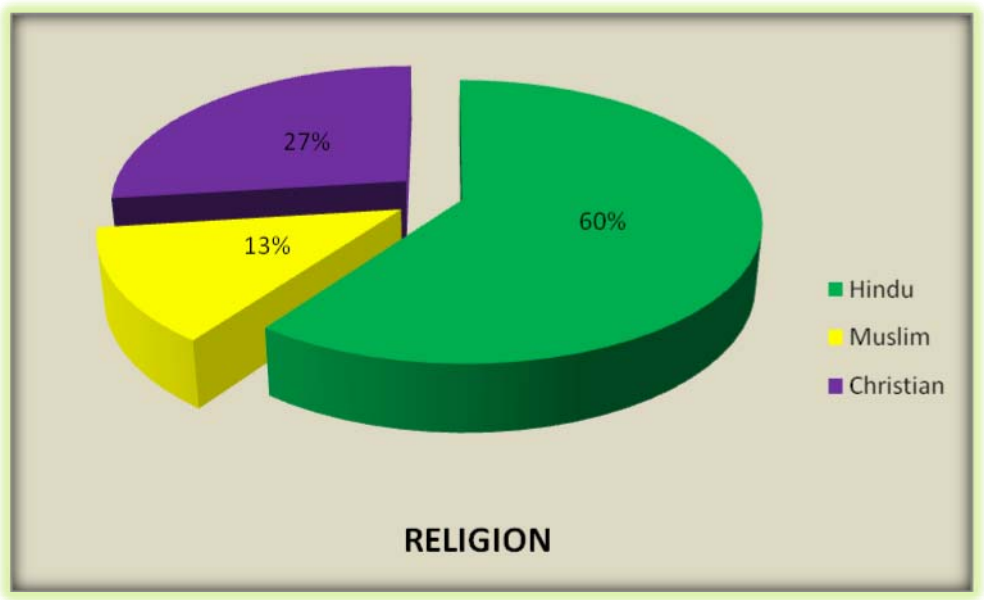


FIGURE 5: PERCENTAGE DISTRIBUTION OF CONTROL GROUP ACCORDING TO THEIR TYPE OF FAMILY

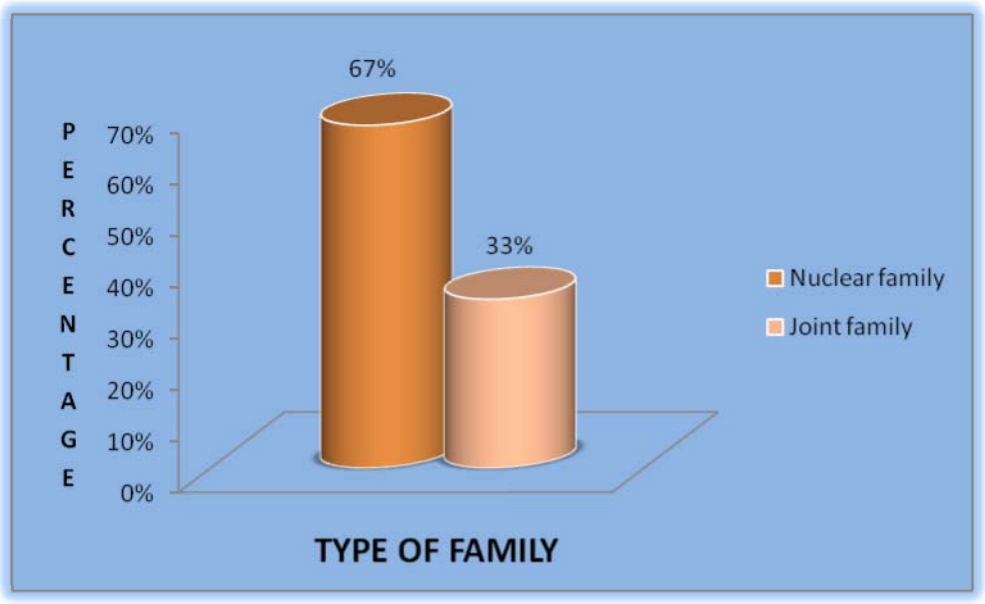


FIGURE 6: PERCENTAGE DISTRIBUTION OF CONTROL GROUP ACCORDING TO THEIR TYPES OF LABOUR

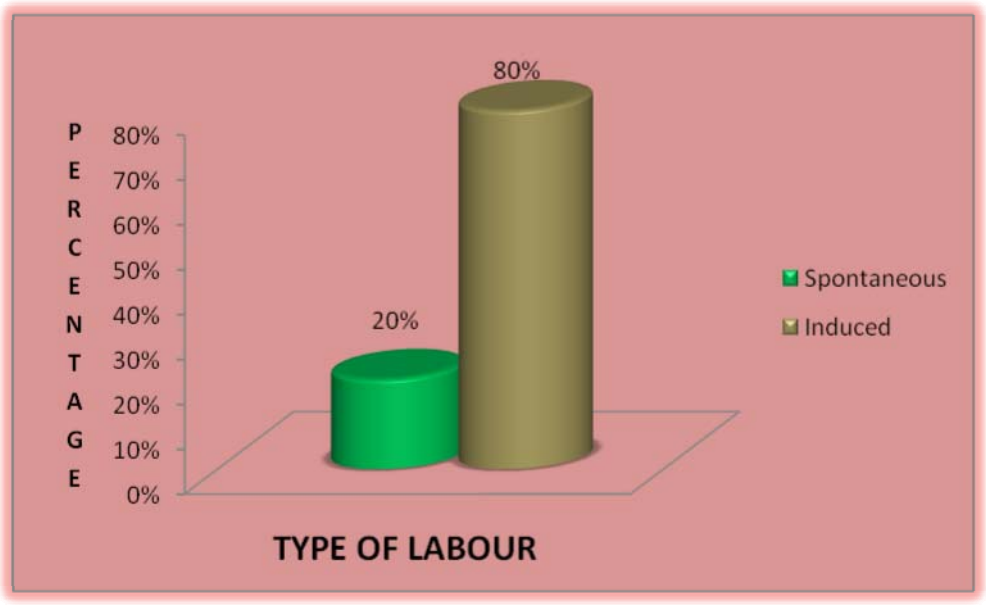


FIGURE 7: PERCENTAGE DISTRIBUTION OF CONTROL GROUP ACCORDING TO THEIR PHASES OF LABOUR

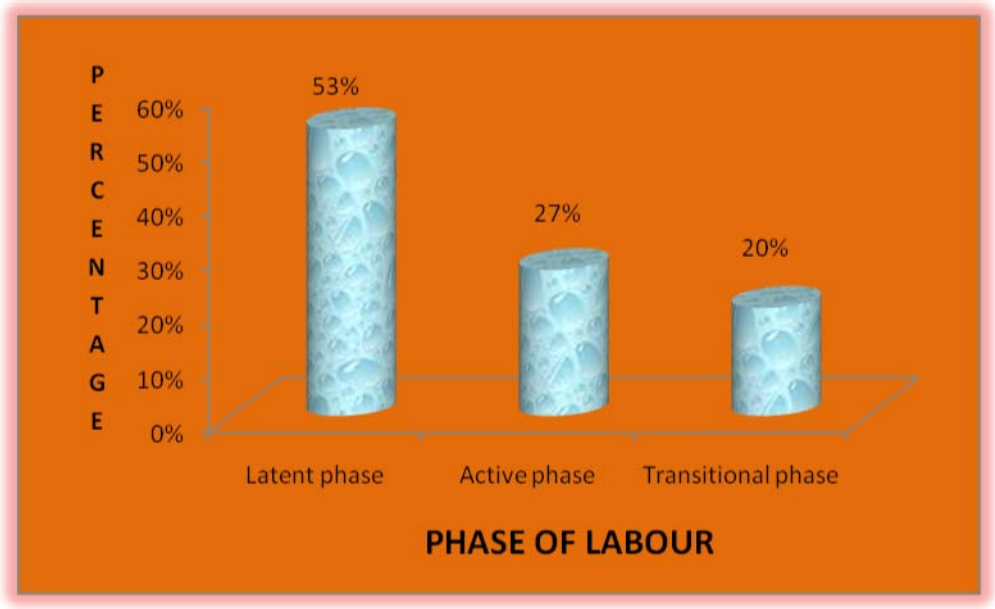


FIGURE 8: PERCENTAGE DISTRIBUTION OF CONTROL GROUP ACCORDING TO THEIR DURATION OF FIRST STAGE OF LABOUR.

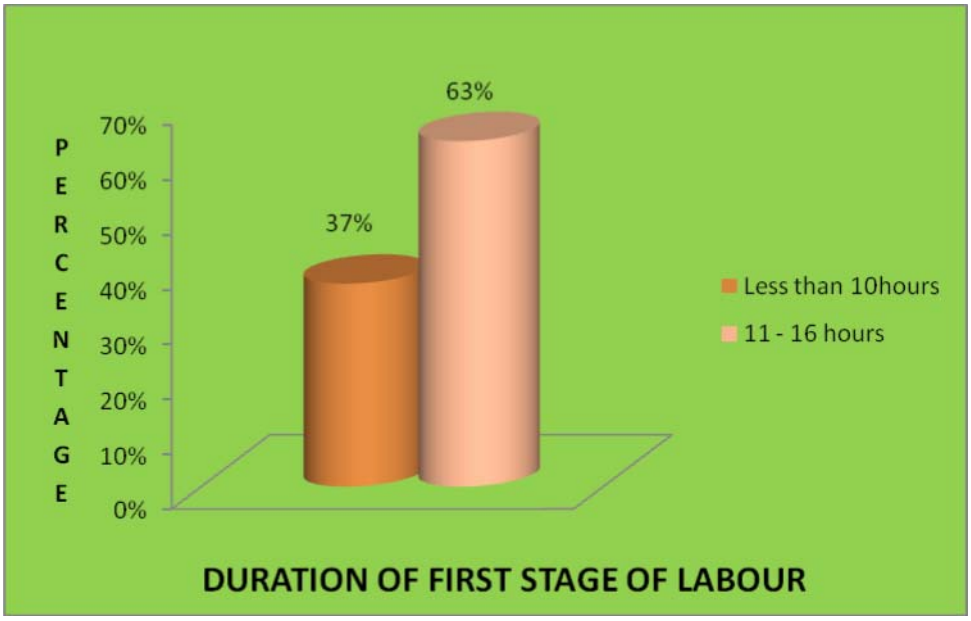


TABLE 2

FREQUENCY AND PERCENTAGE DISTRIBUTION OF SAMPLES (EXPERIMENTAL GROUP) ACCORDING TO THEIR DEMOGRAPHIC OF PRIMI GRAVIDA MOTHERS.

N=30

S.No	CHARACTERISTICS	FREQUENCY	PERCENTAGE
1	AGE		
	18-24Years	15	50%
	25-31Years	11	37%
	32-38Years	4	13%
2	EDUCATION		
	Illiterate	10	33%
	School level	15	50%
	College level	5	17%
3	RELIGION		
	Hindu	15	50%
	Muslim	3	10%
	Christian	12	40%
4	TYPE OF FAMILY		
	Nuclear family	18	60%
	Joint family	12	40%
5	TYPE OF LABOUR		
	Spontaneous	2	7%
	Induced	28	93%
6	PHASES OF LABOUR		
	Latent phase	18	60%
	Active phase	10	33%
	Transitional phase	2	7%

7	DURATION OF FIRST STAGE OF LABOUR		
	Less than 10hours	7	23%
	11 - 16 hours	23	77%

Table 2 shows that regarding the age of the experimental group mothers, 15(50%) were between 18 – 24 years, 11(37%) were found to be between 25 – 31years and 4(13%) found to be between 32 – 38years.

Regarding educational status of the experimental group mothers 10(33%) were in illiterate, 15 (50%) studied in school level and 5(17%) had studied in college level.

Regarding religion of the experimental group mothers, 15(50%) were Hindu, 3(10%) were Muslim and 12(40%) were Christian.

Regarding type of family of the experimental group mothers, 18(60%) were nuclear family and 12(40%) were joint family.

Regarding type of labour of the experimental group mothers, 2(7%) were spontaneous labour and 28(93%)were induced labour.

Regarding phases of labour of the experimental group mothers, 18(60%) were the latent phase and 10(33%) were the active phase, 2(7%) were the transitional phase.

Regarding duration of the first stage of labour of the experimental group mothers, 7(23%) were less than 10hours and 23(77%) were found between 11 – 16hours.

FIGURE 9: PERCENTAGE DISTRIBUTION OF EXPERIMENTAL GROUP ACCORDING TO THEIR AGE

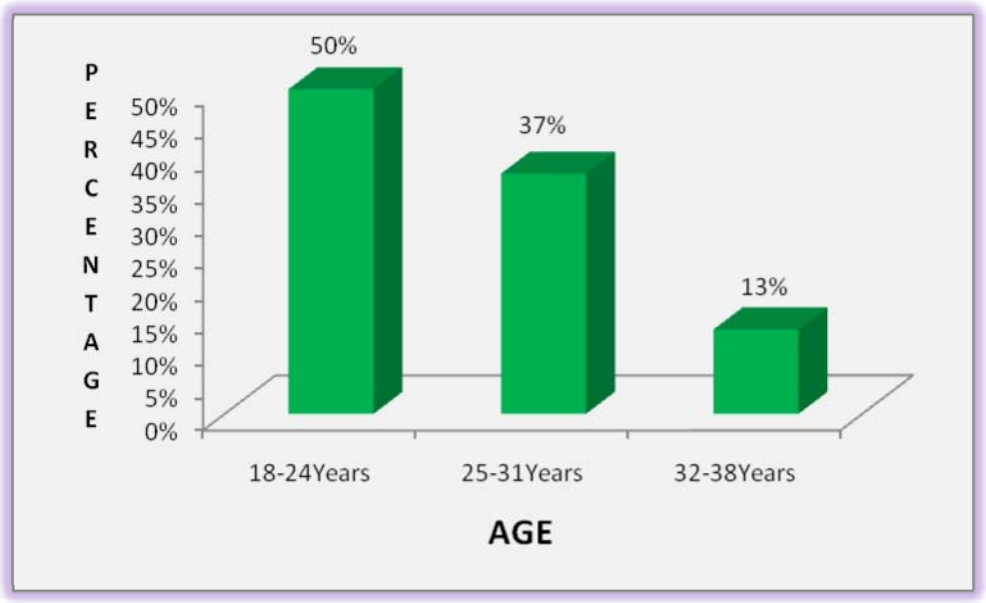


FIGURE 10: PERCENTAGE DISTRIBUTION OF EXPERIMENTAL GROUP ACCORDING TO THEIR EDUCATION

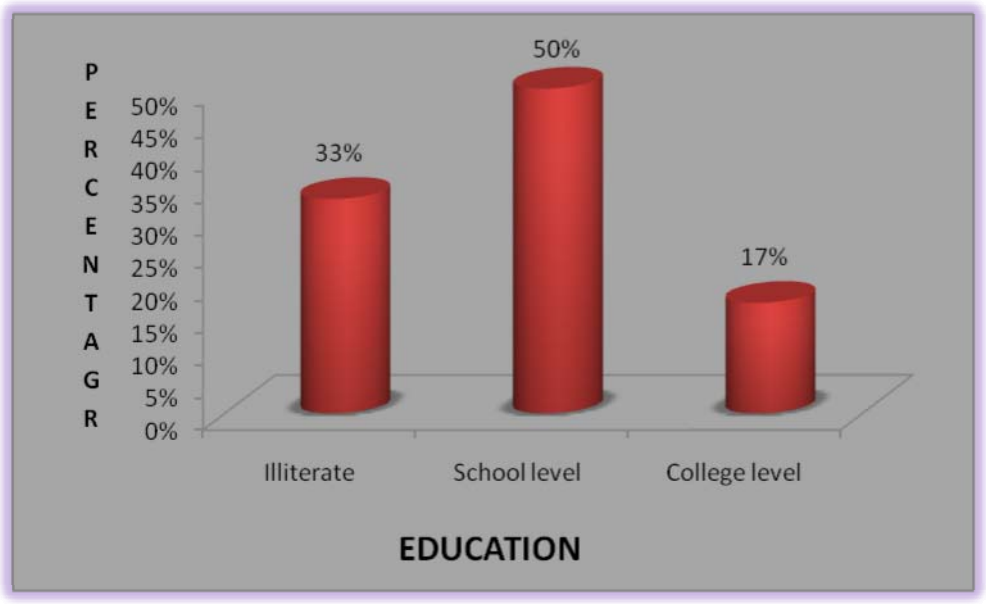


FIGURE 11: PERCENTAGE DISTRIBUTION OF EXPERIMENTAL GROUP ACCORDING TO THEIR RELIGION

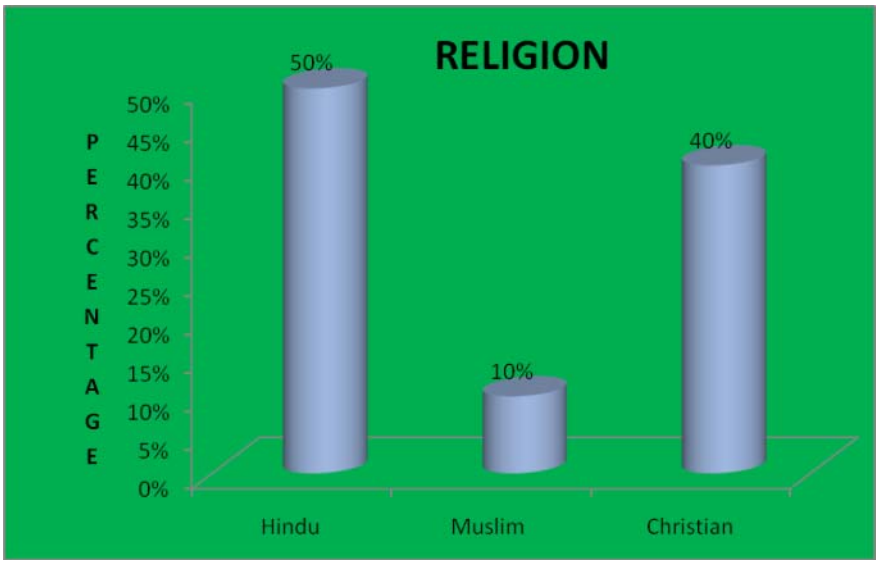


FIGURE 12: PERCENTAGE DISTRIBUTION OF EXPERIMENTAL GROUP ACCORDING TO THEIR TYPE OF FAMILY

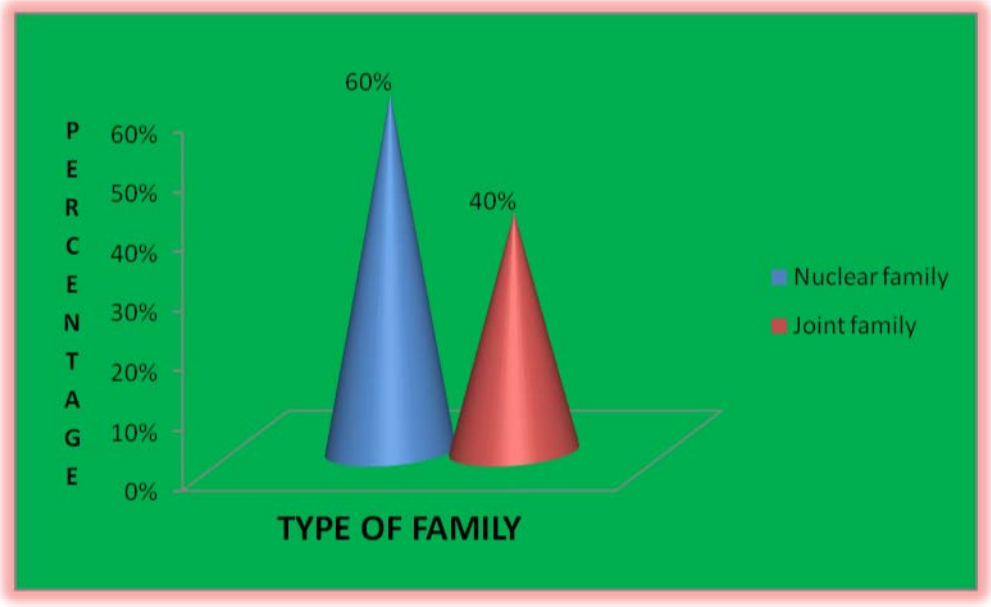


FIGURE 13: PERCENTAGE DISTRIBUTION OF EXPERIMENTAL GROUP ACCORDING TO THEIR TYPE OF LABOUR

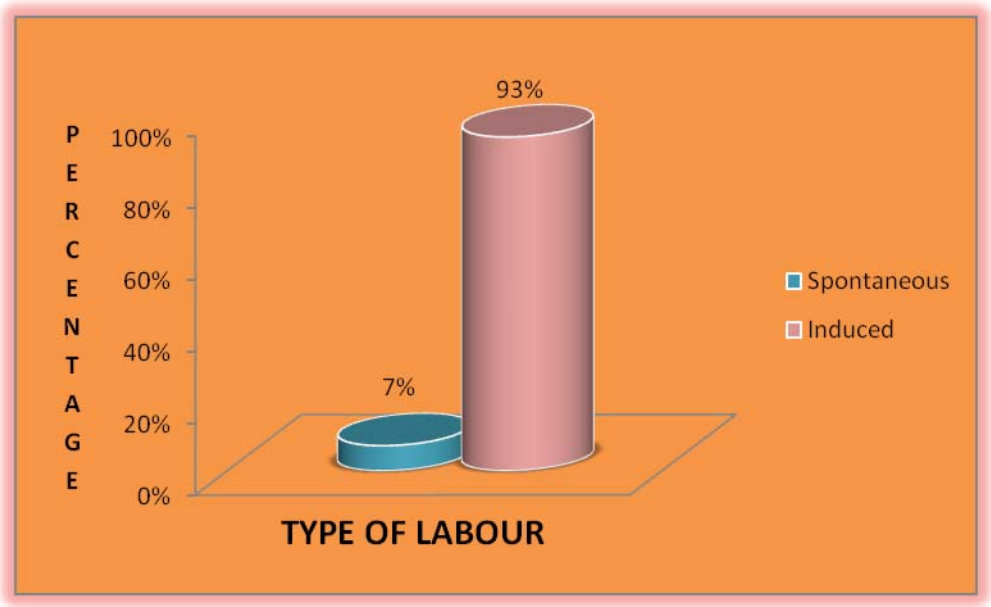


FIGURE 14: PERCENTAGE DISTRIBUTION OF EXPERIMENTAL GROUP ACCORDING TO THEIR PHASE OF LABOUR

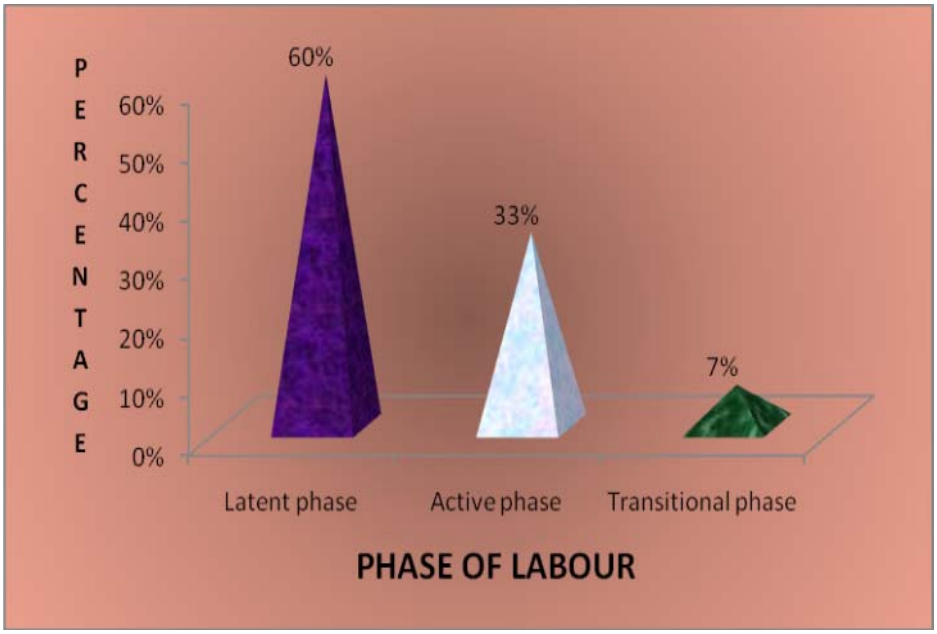
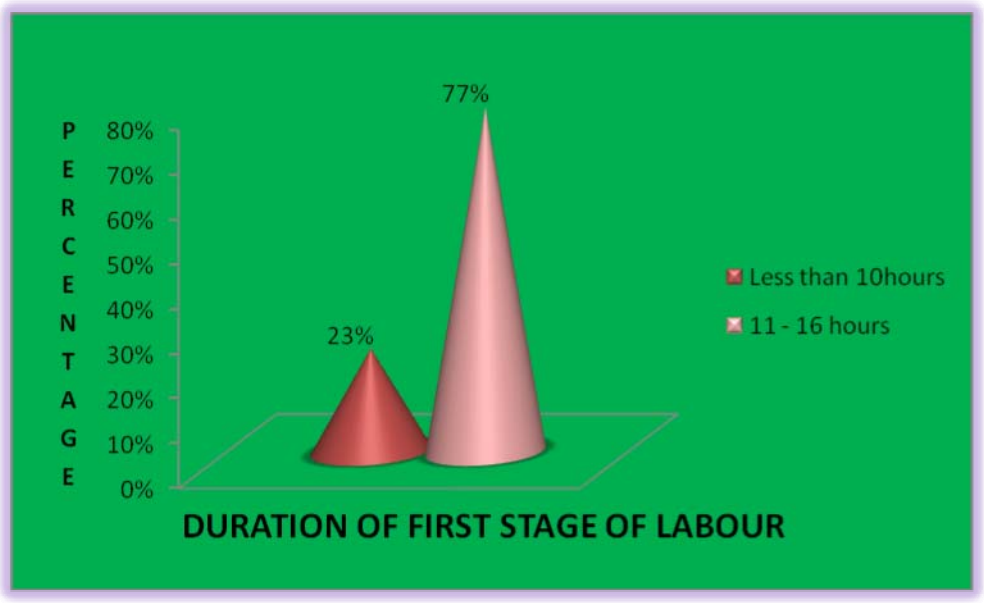


FIGURE 15: PERCENTAGE DISTRIBUTION OF EXPERIMENTAL GROUP ACCORDING TO THEIR DURATION OF FIRST STAGE OF LABOUR.



SECTION II

TABLE 3

DISTRIBUTION OF SAMBLE ACCORDING TO PAIN SCALE SCORE IN CONTROL GROUP.

N=30

S.No	CHARECTERISTICS	FREQUENCY	PERCENTAGE
1	Mild pain	0	0%
2	Moderate pain	0	0%
3	Severe pain	30	100%

The maximum pain score that can be obtained is 10. Based on the score obtained, the samples are arbitrarily divided into 3 categories; mild, moderate and severe.

Mild pain 0 - 30%

Moderate pain 40 – 60%

Severe pain 70 – 100%

Table no.3 shows that 0(0%) mild pain, 0(0%) had moderate pain, and 30(100%) had severe pain.

FIGURE 16: PERCENTAGE DISTRIBUTION OF PAIN SCALE SCORE OF CONTROL GROUP

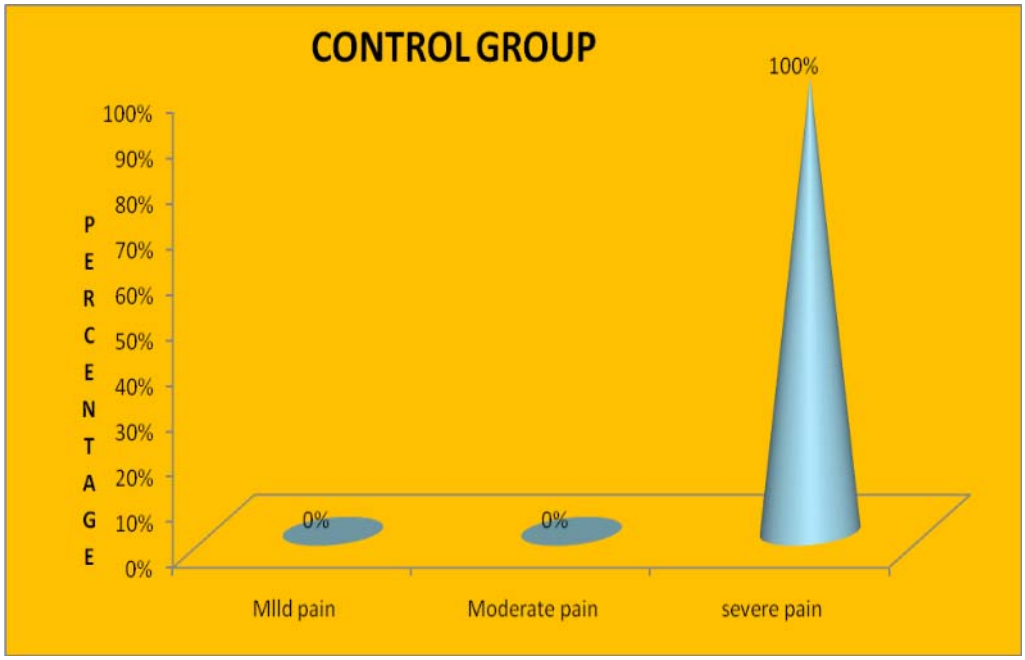


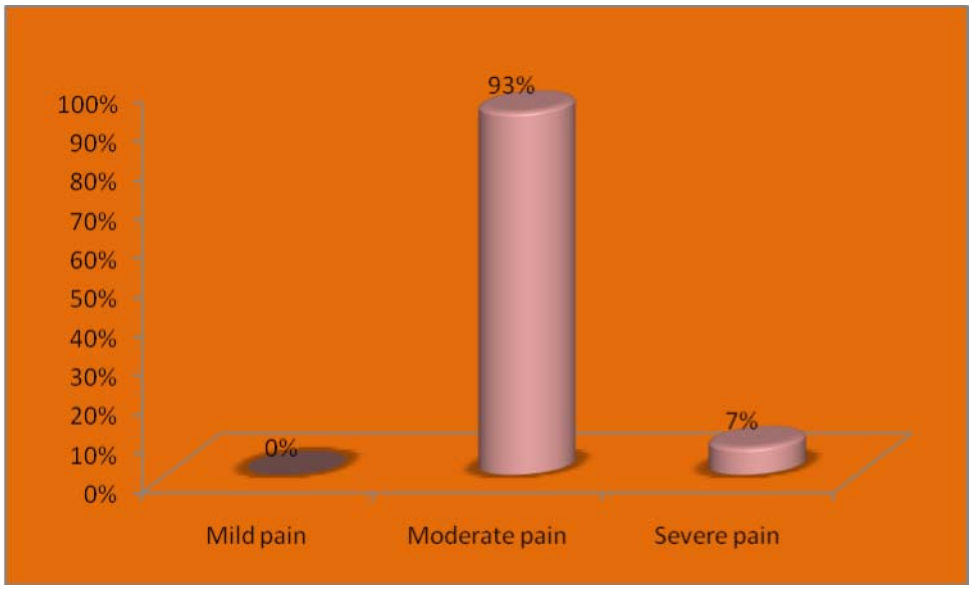
TABLE 4: DISTRIBUTION OF SAMBLE ACCORDING TO PAIN SCALE SCORE IN EXPERIMENTAL GROUP.

N=30

S.NO	CHARECTERISTICS	FREQUENCY	PERCENTAGE
1	Mild pain	0	0%
2	Moderate pain	28	93%
3	Severe pain	2	7%

Table no.3 shows that 0(0%) mild pain, 28(93%) had moderate pain, and 2(7%) had severe pain.

FIGURE 17: PERCENTAGE DISTRIBUTION OF PAIN SCALE SCORE OF EXPERIMENTAL GROUP



SECTION III

TABLE 5

THE EFFECTIVENESS OF SACRAL MASSAGE

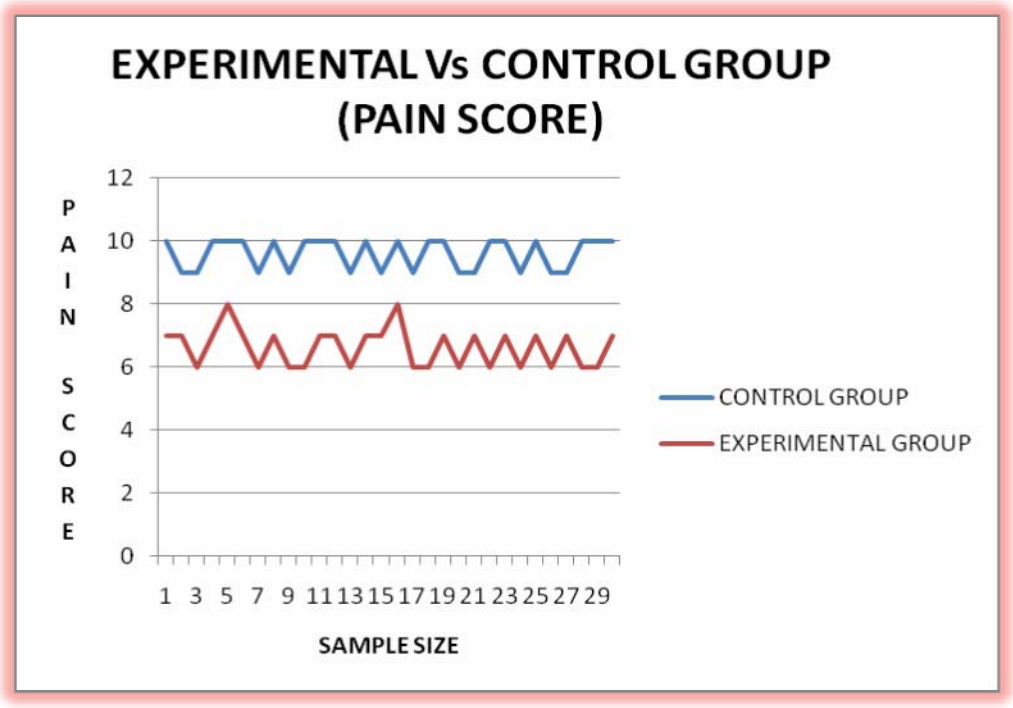
CHARECTERISTICE	MEAN	STD. DEVIATION	95% CONFIDENTIAL INTERVAL OF DIFFERENCE		't' VALUE	DF
			UPPER	LOWER		
Control group and experimental group	2.967	0.615	3.196	2.737	26.42	29

Significant at 0.05 level DF=29

In table no.5 The effectiveness of sacral massage was compared between experimental and control group. The paired 't' test was applied for statistical analysis. The experimental group showed significant improvement in pain level.

The observed value is 26.424 which fall in the rejection region and we conclude that there is a significant difference between the mean pain score of experimental group and pain score of control group.

FIGURE18: FREQUENCY DISTRIBUTION OF EFFECTIVENESS OF SACRAL MASSAGE



SECTION IV

TABLE 6

THE ASSOCIATION BETWEEN THE POST TEST PAIN SCORE AND DEMOGRAPHIC VARIABLES OF COTROL GROUP.

N=30

S.NO	CHARECTERISTICS	MEAN	CHI SQUARE	't' VALUE	STATISTICAL RESULTS
1	**AGE**				
	18 – 24 Years	9.65			
	25 – 31 Years	9.5	2.59	9.488	# NS
	32 – 38 Years	10			
2	**EDUCATION**				
	Illiterate	9.7			
	School level	9.4			# NS
	College level	9.75	2.242	9.488	
3	**RELIGION**				
	Hindu	9.6			
	Muslim	9.5			# NS
	Christian	9.62	0.197	9.488	
4	**TYPE OF FAMILY**				
	Nuclear Family	9.5			# NS
	Joint Family	9.7	0.625	5.991	
5	**TYPE OF LABOUR**				
	Spontaneous labour	9.83			# NS
			1.701	5.991	
	Induced labour	9.54			

6	**PHASES OF LABOUR**				
	Latent phase	9.43			# NS
	Active phase	9.75			
	Transitional phase		3.872	9.488	
7	**DURAT**ION OF FIRST STA**GE OF LABOUR**				# NS
	Less than 12 hours	9.63			
	11 – 16 hours	9.57	0.096	5.991	

#- Non significant

***-**Significant

The table-5 shows that there was no significant association between control group post test pain score and demographic variables such as age, educational status, religion, type of family , typo of labour, phases of labour, and duration of the first stage of labour.

TABLE 7

ASSOCIATION BETWEEN POST TEST PAIN SCORE AND DEMOGRAPHIC VARIABLES OF EXPERIMENTAL GROUP.

N=30

S.NO	CHARECTERISTICS	MEAN	CHI SQUARE	't' VALUE	STATISTICAL RESULTS
1	**AGE**				
	18 – 24 Years	6.66			
	25 – 31 Years	6.5	169.36	9.488	*S
	32 – 38 Years	6.64			
2	**EDUCATION**				
	Illiterate	6.6			
	School level	6.733			*S
	College level	6.4	16.4	9.488	
3	**RELIGION**				
	Hindu	6.4			
	Muslim	7.33			#NS
	Christian	6.75	6.12	9.488	
4	**TYPE OF FAMILY**				
	Nuclear Family	6.61	7.02		
	Joint Family	6.66		5.991	*S
5	**TYPE OF LABOUR**				
	Spontaneous labour	6			*S
	Induced labour	6.67	360.21	5.991	

6	**PHASES OF LABOUR**				
	Latent phase	6.83			
	Active phase	6.4			#NS
	Transitional phase	6	3.633	9.488	
7	**DURATION OF FIRST STAGE OF LABOUR**				#NS
	Less than 12 hours	6.85			
	11 – 16 hours	6.56	2.7714	5.991	

#- Non significant

*-Significant

The table-5 shows that there was significant association between control group post test pain score and demographic variables such as age, educational status, type of family and type of labour.

Age was calculated. The chi-square value was 169.36 and tabulated value was 9.488. The calculated value was greater than the tabulated value at 0.05 level. Thus, there was a significant association between age and pain scale score.

Educational status was calculated. The chi-square value was 16.4 and tabulated value was 9.488. The calculated value was greater than the tabulated value at 0.05 level. Thus, there was a significant association between educational status and pain scale score.

Type of family was calculated. The chi-square value was 7.02 and tabulated value was 5.991. The calculated value was greater than the tabulated value at 0.05 level. Thus, there was a significant association between type of family and pain scale score.

Type of labour was calculated. The chi-square value was 360.21 and tabulated value was 5.991. The calculated value was greater than the tabulated value at 0.05 level. Thus, there was a significant association between type of family and pain scale score.

CHAPTER V

DISCUSSION

The aim of the study was to determine the effectiveness of sacral massage on primi gravida mothers between experimental group and control group mothers.

The research design of this study was quasi experimental post test only design. The setting of the study was the Infant Jesus Hospital in Madurai. The sample size was 60, (i.e.) 30 in control group and 30 in experimental group respectively.

The findings of the study has been discussed with reference to the objectives, the frame work and hypothesis of this study.

THE OBJECTIVES OF THE STUDY WERE;

- To assess the level of pain among control group of mothers.
- To assess the level of pain among experimental group mothers after giving sacral massage.
- To determine the effectiveness of sacral massage in terms of reduction in pain among experimental group mothers.
- To find out the association between effectiveness of sacral massage with selected demographic variables of primi gravida mothers such as age, education, religion, type of family, Type of labour, phase of labour and duration of first stage of labour among experimental group mother.

Objective 1 & 2: The level of pain among control group and experimental group mothers

The post test pain score of primi gravida mothers who are exposed to the sacral massage on pain reduction will be significantly higher than that of control group who are not exposed to the sacral massage.

Table no. 3 shows that 100% of primi gravid mothers have severe pain in control group.

Table no.4 shows that 93% moderate pain and 7% primi gravida mothers have severe pain in experimental group.

Hence the researcher concludes that mothers have severe pain in post test control group mothers may be due to unexposed to the sacral massage. But the mothers have mild to moderate pain in post test, experimental group mothers may be due to exposed to the sacral massage.

Labour is good experience in all mothers. In this moment, the mother with severe pain, it will produce anxious situation for the mothers and entire family. So we are giving massage to the mothers, they are accepting the sacral massage. At the same time, They are willing to know the procedure which is based on their needs. So this pain scale score is lesser than the control group primi gravida mothers.

Objective 3: The effectiveness of sacral massage in terms of reduction in pain among experimental group mothers.

H_1: There will be a significant difference in post test pain score among the experimental and control group mothers.

Table no.5 shows that pain scale score mean value was 2.967, the calculated positive 't' value (26.424) is more than table value at df(29) =0.000. This indicates that there is a significant difference between the mean pain score of experimental group and control group mothers.

Hence the researcher is conclude that there was a significant positive correlation between mean pain score of experimental and control group mothers.

This study was similar to that '**Nalini' (2006),** Sample size 60, A comparison of non pharmacological approach on labour pain using visual analogue scale, The result of this study indicates that, it can effectively labour pain intensity, although non pharmacological approach cannot change the characteristics of pain experienced by women in labour.

Objective 4: A significant association between the pain scale score of mothers in experimental group and selected demographic variables.

H_2; There will be a significant association between the sacral massage and demographic variables such as age, education, religion, type of family, type of labour, phase of labour and duration of first stage of labour among experimental group mothers.

There was a significant association between the pain scale score of mother on sacral massage and demographic variables such as age,

education, type of family and type of labour. Hence, the researcher rejects the null hypothesis and accepts the research hypothesis.

1. Age was calculated. The chi-square value was 169.36 and tabulated value was 9.488. The calculated value was greater than the tabulated value at 0.05 level. Thus, there was a significant association between age and pain scale score.

According to the researcher point of view, regarding age, 25 – 31years of mothers had less pain, because this age group of mothers might have received information about labour and received more support from family. So that the pain level was reduced comparing to the other age group mothers.

2. Educational status was calculated. The chi-square value was 16.4 and tabulated value was 9.488. The calculated value was greater than the tabulated value at 0.05 level. Thus, there was a significant association between educational status and pain scale score.

According to the researcher point of view, regarding the educational status, School level had less pain. Because they might have received more information about labour, as well as had more chance to get personal experience through their relatives or family members, regarding labour pain. So the investigator concludes that, if the mothers receive adequate information about labour process and intervention for labour pain during antenatal period, they are better able to cope up with the labour pain.

3. Type of family was calculated. The chi-square value was 7.02 and tabulated value was 5.991. The calculated value was greater than the tabulated value at 0.05 level. Thus there was a significant association between type of family and pain scale score.

According to the researcher point of view, regarding type of family, the mothers belongs to the joint family had less pain. It might be due to the effective family support. So the investigator concluded that, encouraging family support during labour can help to minimize the labour pain.

4. Type of labour was calculated. The chi-square value was 360.21 and tabulated value was 5.991. The calculated value was greater than the tabulated value at 0.05 level. Thus there was a significant association between type of family and pain scale score.

According to the researcher point of view, regarding type of labour, who were in spontaneous labour, had less pain. It may be due to the spontaneous labour where the labour pain is naturally produced. So the researcher concluded that we can allow the mother for spontaneous delivery. which may be helpful for the mothers to perceive less labour pain.

CHAPTER VI

SUMMARY AND RECOMMENTATION

This chapter presents the summary, major findings, implications, recommendations of the study and conclusion.

SUMMARY:

Sacral massage is one such a intervention for primi mothers during first stage of labour. The pain level was improved during massage, and also provided that comfort, good progress in labour. The aim of the study was to determine the effectiveness of sacral massage during first stage of labour among primi gravid mothers.

A review of related literature and the conceptual framework enabled the investigator to develop the methodology for the study and plan for analysis of data in an effective and efficient way.

The conceptual framework adopted for this study was based on Ludwig von Bertalanffy's, The General System Model theory which focuses on reducing pain. So that, the nurses can practice the sacral massage in hospital as well as community setting. The design was quasi experimental post test only design.

A semi structured questionnaires, observational check list for practice and the pain scale for effectiveness of sacral massage was developed. Convenience sampling technique was used for sample selection. 60 sample (i.e.) 30 samples as control group and 30 samples as experimental group were taken for this study based on the inclusion criteria. The method of data collection of this study includes demo variables

questionnaires, observational check list was administered both control and experimental group samples. The sacral massage was given continuously throughout the first stage of labour for experimental group. On the same day, after delivery, the post test was administered to both control and experimental group using questionnaires and pain scale (visual analogue scale).

Based on the objectives and the hypothesis, the data were analysed using descriptive and inferential statistics. The descriptive statistics used was frequency, mean and standard deviation. Graphical representation was done in terms of bar and pie graph. Inferential statistics such as‘t’ tests the hypothesis. The level of significance for testing the hypothesis was 0.05.

MAJOR FINDINGS OF THE STUDY:

- In control group, 100% had severe pain. Experimental had 93**%** moderate pain and 7% had severe pain in the post test.
- The effectiveness of sacral massage was found between control and experimental group showed significant improvement in pain score. The observed value was 26.42 at 95% of confidential interval (2.73704- 3.19629).

- Comparison of pain score control and experimental group after sacral massage. In pain, significant value is not less than 0.05, it is noted that it improved in pain score level.

- There was a significant association between the post test pain score of experimental group and selected demo variables such as age, education, type of family and type of labour.

DELIMITATIONS:

- Convenience sampling technique was used to select the samples, which limits the generalization of the study findings.
- Study was conducted only in Infant Jesus Hospital.
- Study period was only 6 weeks.
- Sample was 60 primi gravid mothers in first stage of labour.

IMPLICATIONS:

The findings of this study had implications in various areas of nursing i.e. nursing practice, administration, education and nursing research.

IMPLICATION IN NURSING PRACTICE:-

The study brings to light the positive effects of sacral massage in labour pain. The nurse in labour room can use sacral massage as a nursing intervention to reduce the pain. It is a safe and effective intervention for pain and therefore, it can be encouraged by staff nurses in all maternity hospitals and can also in community

IMPLICATION IN NURSING EDUCATION:-

Nursing education is a mean through which nurses are prepared for practice in varies settings. Thus the study results can be used as informative illustrations for students who can effectively use sacral massage.

Nursing educator should emphasize the concept of involvement of family during pregnancy for primi mother and encourage student nurses

to appreciate their rate. It will help students to give nursing care with minimum resources in hospital and community settings.

The institute of nursing education should play an active role in conducting in service education programme, workshops and conducting educational programmes to educate nursing personnel of the hospital about sacral massage..

IMPLICATION IN NURSING ADMINISTRATION:-

Nurse administrator is the back bone for providing facilities to improve knowledge regarding pain reduction during labour . There should be a provision for nurses to devote time for giving health education regarding pain reduction during labour in the community. Improvement of practice of nurse can be brought about without any additional budget or special instruments or other resources and with existing number of personnel. Nurse administrators can make a policy decision to use sacral massage for therapeutic purposes. Staff development programs regarding pain reduction during labour can be conducted for staff nurses posted in the labour room.

IMPLICATION IN NURSING RESEARCH:-

Nurses being the largest group in the health care delivery system and being close to the patient, They should take the steps initiative to conduct further research regarding pain reduction during labour.

Many more effects of sacral massage and its benefits can be identified after being research upon. This study may be utilized as a reference tool for further research studies and also could prevent duplication of studies. The research design, findings and tools can be used for avenues for further research.

RECOMMENDATION:-

- A similar study can be done on a large sample.
- A study can be done involving family members or husband in pain reduction during labour using sacral massage
- A comparative study could be done to assess the effectiveness of sacral massage in terms of reduction of pain among primi gravid mothers and multi gravida mothers.
- A comparative study can be carried out in hospital and community set up.

CONCLUSION:-

Labour is a beautiful experience to the women and pain is a critical determinant for survival in the labour period. If the mother is with labour pain, it is fear and anxiety for the mother. As per the record, the occurrence of pain during labour is high, but it is differ from individual to individual. Demonstration is an effective method of increasing the practice of nurse as well as family members regarding sacral massage.

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APPENDIX I

LETTER SEEKING EXPERTS OPINION FOR CONTENT VALIDITY OF THE TOOL

From:

Ms. Shanthi

M.Sc.Nursing ,II Year,

Matha College of nursing

Manamadurai**.**

To :

Through : The Principal , Matha College of Nursing , Manamadurai.

Respected madam,

Sub: Requisition for getting expert opinion and suggestion for content validity of the tool.

I am the second year master degree student of Matha College of Nursing in Manamadurai. In partial fulfilment of Master Degree in Nursing, I have selected the topic mentioned below for the research project to be submitted to the Dr. MGR Medical university, Chennai.

Problem statement:

A study to determine the effectiveness of sacral massage in reduction of pain during the first stage of labour among primi gravida mothers at selected hospital in Madurai, Tamilnadu".

I request you to kindly validate the tool and give your expert opinion for necessary modification and also I will be very grateful if you refine the problem statement and objectives.

ENCL:

Demographic profile

Observational checklist

Tool for assessment of pain scale

Thanking you

Place: Manamadurai

Date:

APPENDIX –II

LIST OF EXPERTS OPINION FOR CONTENT VALIDITY

1) Dr. Chalice Raja MS.,DGO
   Infant Jesus hospital,
   Madurai.

2) Prof (Mrs.) Merlin, M.Sc, (N),
   Vice- Principal cum HOD obstetrics & gynaecology nursing,
   C.S.I.Jeyaraj Annapackium College of nursing,
   Pasumalai, Madurai.

3) Prof (Mrs.) Vimala, M.Sc, (N),
   HOD obstetrics & gynaecology nursing,
   Sacred Heart College of nursing,
   Anna Nagar, Madurai.

4) Prof (Mrs.) Tamarai Selvi, M.Sc, (N),
   Professor in OBG dept,
   Matha College of Nursing,
   Vaanpuram, Manamadurai.

5) Mrs. Shanthi, M.Sc, (N),
   Lecturer in OBG dept,
   C.S.I.Jeyaraj Annapackium College of nursing,
   Pasumalai, Madurai.

APPENDIX III

LETTER SEEKING PERMISSION TO CONDUCT STUDY IN INFANT JESUS HOSPITAL IN MADHURAI

To:

Respected Sir / Madam,

Sub: Project work of M.Sc., Nursing student in rural area in Manamadurai.

I am to state that Ms. Shanthi is one of our final year M.Sc., Nursing students she has to conduct a project, which is to be a partial fulfilment of university requirement for the degree of Master of Science in Nursing.

The topic of research is "A study to evaluate the effectiveness of sacral massage in term of reduction in pain during the first stage of labour among primi gravida mothers in Infant Jesus Hospital in Madurai, Tamilnadu".

Kindly permit her to do the research work in your rural area.

Thanking you

Place:

Date:

Yours faithfully

Prof. Mrs. Jebamani Augustine

(PRINCIPAL)

APPENDIX IV

TOOLS: DEMOGRAPHIC PROFILE

1. Age

   a. 18 – 24 Years [ ]

   b. 25 – 31 Years [ ]

   c. 32 -38 Years [ ]

2. Educational status

   a. Illiterate [ ]

   b. School level [ ]

   c. Degree and above [ ]

3. Religion

   a. Hindu [ ]

   b. Muslim [ ]

   c. Christian [ ]

4. Type of family

   a. Nuclear family [ ]

   b. Joint family [ ]

ABOUT LABOUR

5. Type of labour

   a. Spontaneous [ ]

   b. Induced [ ]

6. Phases of labour

   a. Latent phase [ ]

   b. Active phase [ ]

   c. transitional phase [ ]

7. Duration of the first stage of labour

   a. Less than 10 hours [ ]

   b. 11 – 16 hrs [ ]

   c. More than 16 hours [ ]

OBSERVATIONAL CHECKLIST

S.NO	CONTENT	YES	NO
1.	Empty the bowel and bladder		
2.	Mother in comfortable position		
3.	Mother has good contraction		
4.	Mother has complication in labour		
5.	Mother has any medical disorders		
6.	Per vaginal examination done		
7.	Mother hydration level maintained		
8.	Vitals stable		
9.	Mother is alert		
10.	Mother has abnormal physical moment		

APPENDIX V

SACRAL MASSAGE

INTRODUCTION:

Many women feel contractions strongly in their lower back, so back massage can be very useful.

In early labor, your partner can use the flat of his hand to stroke down the side of your spine, from shoulder to bottom. He then uses the other hand to stroke down the other side of your spine, maintaining a rhythmical movement, with one hand constantly in contact with you. These long, slow strokes can be very soothing. Make sure that he is massaging you using the whole of his hand and not just the heel. His fingers need to be in contact with your body as he tries to respond to the tensions that he finds there.

In advanced labor, your birth partner can use the heel of his hand to massage firmly over the base of your spine. He will need to apply quite a lot of pressure to counteract strong contractions. Or he can use his thumbs to make circles over the dimples in your bottom. Tell him what you find most helpful.

DEFINITION:

The rubbing, kneading of muscles joints of sacral area with the hands to stimulate their action.

BENEFITS OF MASSAGE THERAPY:

There are several benefits of massage therapies, the most recognized ones are that these help to

- relax the muscles,
- stimulate the nerves,
- improve blood flow and
- induce to a mental state of relaxation.

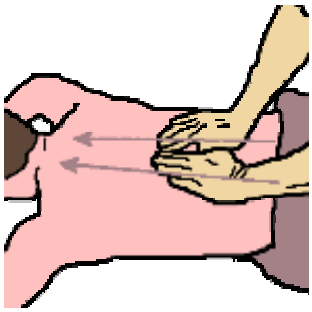
REQUIRED EQUIPMENT FOR THERAPEUTIC MASSAGE:

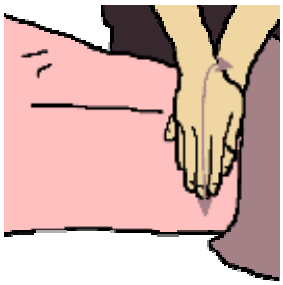
1. Warm, quiet, relaxed environment.
2. Firm comfortable surface such as a (firm) bed, massage table or floor mat.
3. Towels: to lie on and also to cover the body.
4. Cushions or pillows.

MASSAGE TECHNIQUES:

- Recipient should lie down on their side lying, on a mattress, floor mat, or massage bed.

- Make firm, smooth, rhythmic strokes called “effleurage” from the lower back moving to upper back and return to lower back region.





- Place both heels of your hands on either side of the spine. Start applying deeper pressure in circular motions in the lower back region. Slowly move the circles outwards to the sides of the lower back, then upwards and return to the centre.

- Now place the fingers of your hands on the lower back close to the spine. Place the second hand on top of the first one. Press with your fingers and apply pressure to lower back region, starting close to the spine gradually moving outwards.

APPENDIX III

Pain scale

Modified visual analogue scale

10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	

Scoring procedure:

0-3 - Mild pain

4-7 - Moderate pain

8-10 - severe pain